

WHAT IS CLAIMED

1. A two-stage reciprocating positive displacement compressor unit for compressing air to pressures between approximately 23 and approximately 30 bar comprising
 - a central body,
 - a motor for driving the compressor unit, connected to the central body and having a shaft rotating about an axis of rotation,
 - two cylinders connected to the central body and having respective axes,
 - two pistons, each inside one of the two cylinders and moving with alternate motion in the cylinder, for compressing the air, driven by the rotary shaft,
 - cooling means comprising at least one first rotary ventilation part driven by the rotary shaft, for generating a cooling air flow,wherein the cylinders are opposite one another, the shaft axis of rotation and the axes of the cylinders substantially lie in the same plane.
2. The compressor unit, wherein the cooling means comprise a conveyor element for conveying onto

the opposite cylinders the air flow generated by the first rotary ventilation part according to claim 1.

3. The compressor unit according to claim 2, wherein the conveyor element is shaped in such a way that it conveys the air flow onto the motor at a tangent.
4. The compressor unit according to any of the foregoing claims from 1 to 3, wherein the cooling means comprise a second rotary ventilation part driven by the rotary shaft, the second rotary ventilation part being located inside the central body.
5. The compressor unit according to claim 4, wherein the central body has at least one opening for air exchange with the outside, the opening being located close to the second rotary ventilation part.
6. The compressor unit according to claim 4 or 5, wherein the first and second rotary ventilation parts are respectively connected to the rotary shaft at its opposite ends, on opposite sides of

the motor.

7. The compressor unit according to any of the foregoing claims from 1 to 6, wherein the cooling means comprise an intermediate cooling part for cooling the compressed air as it passes from the first to the second cylinder, the intermediate cooling part comprising at least one tubular pipe for the passage of the air, extending in a curved trajectory.
8. The compressor unit according to claim 7, wherein for at least one section of the curved trajectory the tubular pipe comprises two tubular portions through which the compressed air passes in parallel.
9. The compressor unit according to claim 8, wherein the two tubular portions of the pipe are substantially positioned alongside one another.
10. The compressor unit according to any of the foregoing claims from 7 to 9, wherein the conveyor element is shaped in such a way that it conveys the cooling air flow onto the intermediate cooling part.

11. The compressor unit according to any of the foregoing claims from 1 to 10, comprising guide shoes keyed to the pistons and inserted between the pistons and the cylinders, the shoes being made of a material with low friction coefficient.
12. The compressor unit according to claim 11, wherein the guide shoes are made of polytetrafluoroethylene.
13. The compressor unit according to any of the foregoing claims from 1 to 12, wherein the first rotary part comprises an axial fan with an external ring connecting the individual blades, the external ring constituting a flywheel mass for the rotary shaft.
14. The compressor unit according to any of the foregoing claims from 1 to 13, in which the cylinders respectively form a first and a second air compression stage, wherein the ratio between the cylinder capacities of the first and the second stage is between 5.37 and 5.40.
15. A portable air compressor, comprising a

compressor unit according to any of the
foregoing claims.